REAL ℝ

Real Numbers : True or False

Rational Q

Integers Z

Whole N₀

Natural N

Irrational Q′

_____　　　All integers are rational numbers.

_____　　　All negative numbers are integers.

_____　　　3.8765 is a rational number.

_____　　　3.8765….. is a rational number.

_____　　　7 is a real number.

_____　　　All fractions are integers.

_____　　　zero is a natural number.

_____　　　If a number is in integer, then the number is also rational.

_____　　　If a number is real, then it is also rational.

_____　　　8 is an integer.
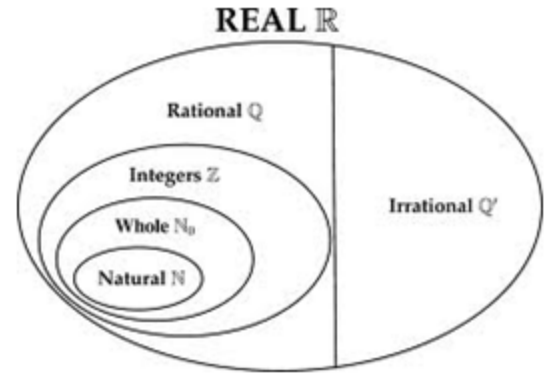
Real Numbers : True or False? Explain.

_____　　　An integer is a rational number. Why?

Explain:　　　_____

_____

_____　　　A rational is an integer.

Explain:　　　_____

_____

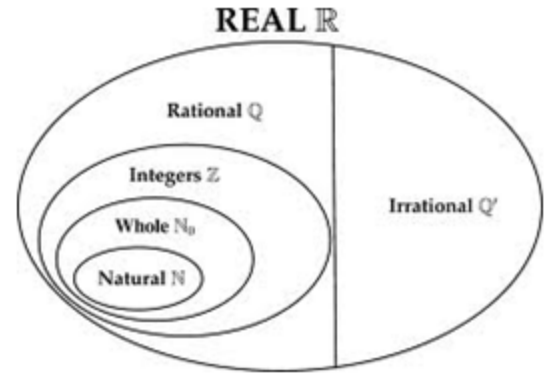_____　　　A number is either a rational or an irrational, but not both.

Explain:　　　_____

_____

Real Numbers : True or False

REAL $\mathbb{R}$

Rational $\mathbb{Q}$

Integers $\mathbb{Z}$

Whole $\mathbb{N}_0$

Natural $\mathbb{N}$

Irrational $\mathbb{Q}'$

___T____   All integers are rational numbers.

___F____   All negative numbers are integers.

___T____   3.8765 is a rational number.

___F____   3.8765….. is a rational number.

___T____   7 is a real number.

___F____   All fractions are integers.

___F____   zero is a natural number.

___T____   If a number is in integer, then the number is also rational.

___F____   If a number is real, then it is also rational.

___T____   8 is an integer.

Real Numbers : True or False? Explain.

_____   An integer is a rational number. Why?

Explain: _____
Since any integer can be formatted as a fraction by putting it over 1, then this is **true.**

_____   A rational is an integer.

Explain: _____
Not necessarily; $^4/_1$ is an integer, but $^2/_3$ is not! So this is **false.**

_____   A number is either a rational or an irrational, but not both.
Explain: _____
True! In decimal form, a number is either non-terminating and non-repeating (so it's an irrational) or not (so it's a rational); there is no overlap between these two number types!